WHAT IS CLAIMED IS:

1. An electroluminescent device comprising a hole-injecting layer and an electron-injecting layer, wherein at least one of the hole-injecting layer and the electron-injecting layer comprises a single-ion conductor.

2. An electroluminescent device comprising:

a transparent substrate;

a semitransparent electrode deposited on the transparent substrate;

a hole-injecting layer positioned on the semitransparent electrode;

an emissive layer comprising an organic electroluminescent material, positioned on the hole-injecting layer;

an electron-injecting layer positioned on the emissive layer; and,

a metal electrode deposited on the electron-injecting layer,

wherein the hole-injecting layer, the electron-injecting layer, or both, comprises a single-ion conductor.

3. The electroluminescent device of Claim 2, wherein the transparent substrate comprises a material selected from the group consisting of glass, quartz, and polyethylene terephthalate.

4. The electroluminescent device of Claim 2, wherein the semitransparent electrode comprises a material selected from the group consisting of lead oxide, indium tin oxide, doped polyaniline, doped polypyrrole, doped polythiophene, and polyethylene dioxythiophene.

5. The electroluminescent device of Claim 2, wherein the emissive layer comprises a material selected from the group consisting of emissive conjugated polymer, emissive non-conjugated polymer, emissive monomeric or oligomeric material, poly(meta-methylacrylic acid), poly(styrene), and poly(9-vinylcarbazole).

6. The electroluminescent device of Claim 5, wherein the emissive conjugated polymer is selected from the group consisting of poly(*p*-phenylene vinylene), poly(thiophene), poly(*p*-phenylene), poly(fluorene), poly(arylenes), poly(arylene vinylene), polyquinoline, polypyrrole, polyaniline, polyacetylene, and derivatives thereof.

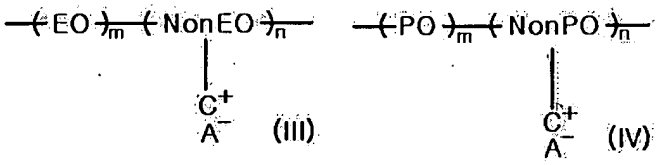
7. The electroluminescent device of Claim 5, wherein the emissive non-conjugated polymer is a polymer having non-conjugated main chains and side chains substituted with emissive functional groups.

8. The electroluminescent device of Claim 5, wherein the emissive monomeric or oligomeric material is selected from the group consisting of alumina quinone, rubrene, anthracene, perylenene, coumarine 6, Nile red, aromatic diamine, N,N'-diphenyl-N,N'-bis-(3-methylphenyl)-1,1'-biphenyl-4,4'-diamine), (3-(4-biphenyl)-4-phenyl-5-(4-tert-butylphenyl)-1,2,4-triazole), (dicyanomethylene)-2-methyl-6-(*p*-dimethylaminostyryl)-4*H*-pyran), and derivatives thereof.

9. The electroluminescent device of Claim 2, wherein the metal electrode comprises a material selected from the group consisting of aluminum, magnesium, lithium, calcium, copper, silver, iron, platinum, indium, palladium, tungsten, zinc, gold, lead, and alloys thereof.

10. The electroluminescent device of Claim 2, wherein the hole-injecting layer comprises a single-anion conductor.

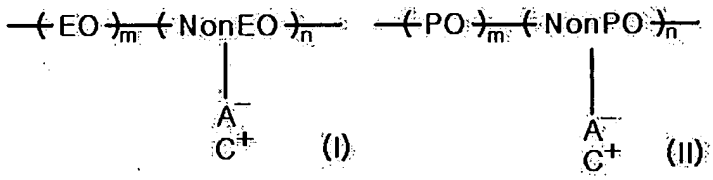
11. The electroluminescent device of Claim 10, wherein the single-anion conductor comprises a material selected from the group consisting of polymer of the formula (III) and polymer of the formula (IV),



wherein EO represents ethyleneoxide; NonEO represents non-ethyleneoxide; PO represents propyleneoxide; NonPO represents non-propyleneoxide; A^- represents an anion; C^+ represents a cation; m + n = 1; and n represents a number more than 0 and less than 1.

12. The electroluminescent device of Claim 2, wherein the electron-injecting layer comprises a single-cation conductor.

13. The electroluminescent device of Claim 12, wherein the single-cation conductor comprises a material selected from the group consisting of polymer of the formula (I) and polymer of the formula (II),



wherein EO represents ethyleneoxide; NonEO represents non-ethyleneoxide; PO represents propyleneoxide; NonPO represents non-propyleneoxide; A^- represents an anion; C^+ represents a cation; m + n = 1; and n is a number more than 0 and less than 1.

14. An electroluminescent device comprising:

a transparent substrate;

a semitransparent electrode deposited on the transparent substrate;

a hole-injecting layer comprising a single-anion conductor, positioned on the semitransparent electrode;

an emissive layer comprising an organic electroluminescent material, positioned on the hole-injecting layer;

an electron-injecting layer comprising a single-cation conductor, positioned on the emissive layer; and,

a metal electrode deposited on the electron-injecting layer.

15. An electroluminescent device comprising:

a transparent substrate;

a semitransparent electrode deposited on the transparent substrate;

an electron-injecting layer comprising a single-cation conductor, positioned on the semitransparent electrode;

an emissive layer comprising an organic electroluminescent material, positioned on the electron-injecting layer;

a hole-injecting layer comprising a single-anion conductor, positioned on the emissive layer; and,

a metal electrode deposited on the hole-injecting layer.

16. An electroluminescent device comprising:

a transparent substrate;

a semitransparent electrode deposited on the transparent substrate;

a hole-injecting layer comprising a single-anion conductor, positioned on the semitransparent electrode;

an emissive layer comprising an organic electroluminescent material, positioned on the hole-injecting layer; and,

a metal electrode deposited on the emissive layer.

17. An electroluminescent device comprising:

a transparent substrate;

a semitransparent electrode deposited on the transparent substrate;

a electron-injecting layer comprising a single-cation conductor, positioned on the semitransparent electrode;

an emissive layer comprising an organic electroluminescent material, positioned on the electron-injecting layer; and,

a metal electrode deposited on the electron-injecting layer.

18. An electroluminescent device comprising:

a transparent substrate;

a semitransparent electrode deposited on the transparent substrate;

an emissive layer comprising an organic electroluminescent material, positioned on the semitransparent electrode;

an electron-injecting layer comprising a single-cation conductor, positioned on the emissive layer; and,

a metal electrode deposited on the electron-injecting layer.

19. An electroluminescent device comprising:

a transparent substrate;

a semitransparent electrode deposited on the transparent substrate;

an emissive layer comprising an organic electroluminescent material, positioned on the semitransparent electrode;

a hole-injecting layer comprising a single-anion conductor, positioned on the emissive layer; and,

a metal electrode deposited on the hole-injecting layer.